

WHAT IS CLAIMED IS:

1. A graphic display apparatus for displaying a graphic which is represented by binary bit map data, comprising:

a display device including a plurality of sub-pixels; and

a control section for controlling the display device,

wherein the plurality of sub-pixels form a plurality of groups,

each of the plurality of groups includes a predetermined plural number of sub-pixels, and

the control section assigns each of bits included in the bit map data to one of the plurality of groups and displays the graphic by controlling sub-pixels included in the one of the plurality of groups based on information about bits located in the vicinity of the bit assigned to the one of the plurality of groups.

2. A graphic display apparatus according to claim 1, wherein the control section defines a basic portion of the graphic to be displayed on the display device based on the information about the bits located in the vicinity of the bit assigned to the one of the plurality of groups.

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3. A graphic display apparatus according to claim 1, wherein the control section controls the sub-pixels included in the one of the plurality of groups based on information about continuity of the bits located in the vicinity of the bit corresponding to the one of the plurality of groups.

4. A graphic display apparatus according to claim 1, wherein:

one of at least one color element is pre-assigned to each of the plurality of sub-pixels, and the intensity of each of the at least one color element is represented stepwise through a plurality of color element levels;

each of the plurality of sub-pixels has one of the plurality of color element levels; and

the control section sets a color element level of at least one particular sub-pixel corresponding to a basic portion of the graphic to be displayed on the display device to a maximum or semi-maximum color element level, and sets a color element level of at least one sub-pixel adjacent to the at least one particular sub-pixel corresponding to the basic portion of the graphic to a color element level different from the maximum or semi-maximum color element level.

5. A graphic display apparatus according to claim 4, wherein the control section adjusts a width of a line of the graphic to be displayed on the display device by controlling the number of sub-pixels corresponding to the basic portion of the graphic.

6. A graphic display apparatus according to claim 4, wherein the control section adjusts a width of a line of the graphic to be displayed on the display device by controlling the color element level of a sub-pixel adjacent to the at least one particular sub-pixel corresponding to the basic portion of the graphic.

7. A graphic display apparatus according to claim 4, wherein:

each of the plurality of sub-pixels is controlled by converting the color element level to a brightness level according to a predetermined table; and

the control section generates the predetermined table according to a characteristic of the display device.

8. A graphic display apparatus according to claim 7, wherein the control section compares a characteristic of

a reference display device and the characteristic of the display device and generates the predetermined table according to a difference in the characteristics.

9. A character display apparatus for displaying a character which is represented by binary bit map data, comprising:

a display device including a plurality of sub-pixels; and

a control section for controlling the display device,

wherein the plurality of sub-pixels form a plurality of groups,

each of the plurality of groups includes a predetermined plural number of sub-pixels,

the control section assigns each of bits included in the bit map data to one of the plurality of groups, and

according to additional information provided to at least one of the bits included in the bit map data, the control section switches a mode for controlling sub-pixels included in a group to which the bit provided with the additional information is assigned between the following two different modes:

(1) the sub-pixels are controlled based on information about bits located in the vicinity of the bit provided with the additional information; and

(2) the sub-pixels are controlled based on a pattern designated by the additional information.

10. A character display apparatus, comprising:

a display device including a plurality of sub-pixels;

a control section for controlling the display device; and

a storage section for storing basic portion data which defines a basic portion of a character on a sub-pixel by sub-pixel basis,

wherein one of a plurality of color elements is pre-assigned to each of the plurality of sub-pixels,

the intensity of each of the plurality of color elements is represented stepwise through a plurality of color element levels,

each of the plurality of sub-pixels has one of the plurality of color element levels, and

the control section:

reads the basic portion data from the storage section;

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sets a color element level of at least one particular sub-pixel corresponding to the basic portion of the character to a predetermined color element level based on the basic portion data; and

sets a color element level of at least one sub-pixel adjacent to the at least one particular sub-pixel corresponding to the basic portion of the character to a color element level different from the predetermined color element level.

11. A graphic display method for displaying a graphic which is represented by binary bit map data on a display device including a plurality of sub-pixels, wherein:

the plurality of sub-pixels form a plurality of groups;

each of the plurality of groups includes a predetermined plural number of sub-pixels; and

the method comprises steps of:

(a) assigning each of bits included in the bit map data to one of the plurality of groups; and

(b) displaying the graphic on the display device by controlling sub-pixels included in one of the plurality of groups based on information about bits located in the vicinity of the bit assigned to the one

of the plurality of the groups.

12. A character display method for displaying a character which is represented by binary bit map data on a display device including a plurality of sub-pixels, wherein:

the plurality of sub-pixels form a plurality of groups;

each of the plurality of groups includes a predetermined plural number of sub-pixels; and

the method comprises steps of:

(a) assigning each of bits included in the bit map data to one of the plurality of groups; and

(b) according to additional information provided to at least one of the bits included in the bit map data, switching a mode for controlling sub-pixels included in a group to which the bit provided with the additional information is assigned between the following two different modes:

(b-1) the sub-pixels are controlled based on information about bits located in the vicinity of the bit provided with the additional information; and

(b-2) the sub-pixels are controlled based on a pattern designated by the additional information.

13. A character display method for displaying a character on a display device including a plurality of sub-pixels, wherein:

one of a plurality of color elements is pre-assigned to each of the plurality of sub-pixels;

the intensity of each of the plurality of color elements is represented stepwise through a plurality of color element levels;

each of the plurality of sub-pixels has one of the plurality of color element levels; and

the method comprises steps of:

(a) reading from a storage device, basic portion data which defines a basic portion of the character on a sub-pixel by sub-pixel basis;

(b) setting a color element level of at least one particular sub-pixel corresponding to the basic portion of the character to a predetermined color element level based on the basic portion data; and

(c) setting a color element level of at least one sub-pixel adjacent to the at least one particular sub-pixel corresponding to the basic portion of the character to a color element level different from the predetermined color element level.

14. A recording medium which can be read by an information display apparatus incorporating a display device including a plurality of sub-pixels, wherein:

the recording medium contains a program for allowing the information display apparatus to execute a graphic display process;

the plurality of sub-pixels form a plurality of groups;

each of the plurality of groups includes a predetermined plural number of sub-pixels; and

the graphic display process comprises steps of:

(a) assigning each of bits included in binary bit map data to one of the plurality of groups; and

(b) displaying a graphic on the display device by controlling sub-pixels included in one of the plurality of groups based on information about bits located in the vicinity of the bit assigned to the one of the plurality of the groups.

15. A recording medium which can be read by an information display apparatus incorporating a display device including a plurality of sub-pixels, wherein:

the recording medium contains a program for

allowing the information display apparatus to execute a character display process;

the plurality of sub-pixels form a plurality of groups;

each of the plurality of groups includes a predetermined plural number of sub-pixels; and

the character display process comprises steps of:

(a) assigning each of bits included in binary bit map data to one of the plurality of groups; and

(b) according to additional information provided to at least one of the bits included in the bit map data, switching a mode for controlling sub-pixels included in a group to which the bit provided with the additional information is assigned between the following two different modes:

(b-1) the sub-pixels are controlled based on information about bits located in the vicinity of the bit provided with the additional information; and

(b-2) the sub-pixels are controlled based on a pattern determined by the additional information.

16. A recording medium which can be read by an information display apparatus incorporating a display device

including a plurality of sub-pixels and a storage section for storing basic portion data for defining a basic portion of a character on a sub-pixel by sub-pixel basis, wherein:

the recording medium contains a program for allowing the information display apparatus to execute a character display process;

one of a plurality of color elements is pre-assigned to each of the plurality of sub-pixels;

the intensity of each of the plurality of color elements is represented stepwise through a plurality of color element levels;

each of the plurality of sub-pixels has one of the plurality of color element levels; and

the character display process comprises steps of:

(a) reading from the storage section the basic portion data which defines the basic portion of the character on a sub-pixel by sub-pixel basis;

(b) setting a color element level of at least one particular sub-pixel corresponding to the basic portion of the character to a predetermined color element level based on the basic portion data; and

(c) setting a color element level of at least one sub-pixel adjacent to the at least one particular

sub-pixel corresponding to the basic portion of the character to a color element level different from the predetermined color element level.

17. A program for allowing an information display apparatus incorporating a display device including a plurality of sub-pixels to execute a graphic display process, wherein:

the plurality of sub-pixels form a plurality of groups;

each of the plurality of groups includes a predetermined plural number of sub-pixels; and

the graphic display process comprises steps of:

(a) assigning each of bits included in binary bit map data to one of the plurality of groups; and

(b) displaying a graphic on the display device by controlling sub-pixels included in one of the plurality of groups based on information about bits located in the vicinity of the bit assigned to the one of the plurality of the groups.

18. A program for allowing an information display apparatus incorporating a display device including a plurality of sub-pixels to execute a character display

process, wherein:

the plurality of sub-pixels form a plurality of groups;

each of the plurality of groups includes a predetermined plural number of sub-pixels; and

the character display process comprises steps of:

(a) assigning each of bits included in binary bit map data to one of the plurality of groups; and

(b) according to additional information provided to at least one of the bits included in the bit map data, switching a mode for controlling sub-pixels included in a group to which the bit provided with the additional information is assigned between the following two different modes:

(b-1) the sub-pixels are controlled based on information about bits located in the vicinity of the bit provided with the additional information; and

(b-2) the sub-pixels are controlled based on a pattern determined by the additional information.

19. A program for allowing an information display apparatus incorporating a display device including a plurality of sub-pixels and a storage section for storing

basic portion data for defining a basic portion of a character on a sub-pixel by sub-pixel basis to execute a character display process, wherein:

one of a plurality of color elements is pre-assigned to each of the plurality of sub-pixels;

the intensity of each of the plurality of color elements is represented stepwise through a plurality of color element levels;

each of the plurality of sub-pixels has one of the plurality of color element levels; and

the character display process comprises steps of:

(a) reading from the storage section the basic portion data which defines the basic portion of the character on a sub-pixel by sub-pixel basis;

(b) setting a color element level of at least one particular sub-pixel corresponding to the basic portion of the character to a predetermined color element level based on the basic portion data; and

(c) setting a color element level of at least one sub-pixel adjacent to the at least one particular sub-pixel corresponding to the basic portion of the character to a color element level different from the predetermined color element level.